



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,176	03/02/2004	Kenichi Iizuka	108273-00006	3546
4372	7590	09/12/2007	EXAMINER	
ARENT FOX LLP 1050 CONNECTICUT AVENUE, N.W. SUITE 400 WASHINGTON, DC 20036			VIDWAN, JASJIT S	
			ART UNIT	PAPER NUMBER
			2182	
			NOTIFICATION DATE	DELIVERY MODE
			09/12/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DCIPDocket@arentfox.com
IPMatters@arentfox.com
Patent_Mail@arentfox.com

Office Action Summary	Application No. 10/790,176	Applicant(s) IIZUKA ET AL.	
	Examiner Jasjit S. Vidwan	Art Unit 2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
 4a) Of the above claim(s) 11-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/23/07 has been entered.

Response to Arguments

2. Applicant's arguments filed 07/23/07 have been fully considered but they are not persuasive. Applicant argues that prior art fails to teach a system wherein, as amended, the device itself provides control information rather than the state machine indicating the control information.

3. As per the above argument, **Examiner disagrees**. It should be noted that the Applicant in his argument points to the TXFIFO as issuing the control information (txfifo_do & fxfifo_empty), however Examiner believes that the Applicant might have misinterpreted TXFIFO as being register holding the control information instead of TFWSM register/state machine (see Fig. 4) as was cited in previous rejection. With respect to Applicant's above argument, Preiss teaches a system wherein the control information such as source and destination pointers among other control information is in fact provided by the device (see Device to Host transfer) wherein the device software provides the above information to the EPEC which further provides it to the TFWSM (see Fig. 4) [see Col. 3, Lines 54-56]. Hence it is the position of the Examiner that prior art still reads on the claimed invention.

Drawings

4. Figures 46-48 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not

accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) The invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Preiss et al, U.S. Patent No: 6,757,763 **[herein after Preiss]**.

3. **As per claims 1, 6 and 7**, Preiss teaches an information-processing unit **[Fig. 1, element 100]** for carrying out information processing in cooperation with an external host **[Fig. 1, element 103]** apparatus connected thereto via an external connection bus **[Fig. 1, element 107]**, comprising:

a. Internal CPU **[Fig. 1, element 102, "UDC"]**

b. Receive buffer for storing only receive data received from said external host apparatus **[Fig. 2b & 8, element 800, "8-Byte Receive FIFO"]**

- c. Receive register **[Fig. 8, element 802, RFRSM is a state machine which retains information and therefore anything that retains information has memory (register)]** for storing only receive communication control information concerning the receive data **[Col. 6, Lines 54-60 and also see Col. 6, Line 64-Col. 7, Line 7 – RFRSM manages the communication control information for data transfer between the Receive FIFO and the RXRR register]** sent from the first device for handling the communication data [see Col. 3, Lines 54-56]
- d. Transmit buffer for storing only transmit data transmitted from said internal CPU via an internal bus **[Fig. 2b, element 300]**
- e. Transmit register **[Fig. 4, element 302, TFWSM is a state machine which retains information and therefore anything that retains information has memory (register)]** for storing only transmit communication control information concerning the transmit data **[see Col. 5, Lines 46-59; TFWSM manages the communication of the communication data]**
- f. Control circuit **[Fig. 1, 105, “EPEC”]** for passing the receive data stored in said receive register to said internal CPU and passing the receive communication control information stored in said receive register to said internal CPU **[Col. 3, Line 50 – Col. 4, Line 16, ‘IN Transaction (Device to host)']**, and further passing the transmit data stored in said transmit buffer to said external host apparatus and passing transmit communication control information stored in said transmit register to said external host apparatus **[Col. 4, Lines 17-54, “Out Transaction (Host to Device)']**, wherein the second device performs an appropriate receive process according to the control information **[see Col. 3, Lines 9-18]**.
4. **As per claim 2**, Preiss teaches an inter-bus communication interface device wherein said buffer is of a type that outputs data in the order that the data are stored **[Col. 1, Lines 35-40, “FIFO –First in First Out”]**.
5. **As per claim 3**, Preiss teaches an inter-bus communication interface device wherein said buffer includes a plurality of buffer areas, said buffer areas being alternately [As data moves

Art Unit: 2182

across buffer areas, the location the data is stored will be alternately changed through the buffer] used in storing the communication data **[Col. 2, Lines 50-56]**.

6. **As per claim 4**, Preiss teaches communication interface device wherein said control circuit outputs an interrupt signal to the second device immediately after the communication control information is stored in said register **[Col. 3, Lines 1-8]**.

7. **As per claim 5 and 9**, Preiss teaches communication interface device further including a status register for storing information indicative of whether or not un-transmitted data exists in said register **[Col. 5 Lines 26-35]** and wherein said control circuit updates the information in said status register, when new data is stored in said register, or when data in said buffer is read out by the second device **[Col. 5, Lines 41-45]**.

8. **As per claim 8**, Preiss teaches information processing unit wherein said control circuit outputs an interrupt signal to said internal CPU, when said receive buffer is full of the receive data, or when the receive communication control information is stored in said receive register **[Col. 5, Lines 26-35]**.

9. **As per claim 10**, Preiss teaches information processing unit wherein said control circuit outputs a transmit data-related request signal for requesting reception of the transmit data, to said external host apparatus, when data is stored in said transmit buffer or said transmit register **[Col. 3, Lines 51-59]**.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jasjit S. Vidwan whose telephone number is (571) 272-7936. The examiner can normally be reached on 8am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, KIM HUYNH can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2182

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JSV
8/31/07



KIM HUYNH
SUPERVISORY PATENT EXAMINER

8/31/07